is not normally subject to disassembly without the destruction or the impairment of design use. (EXAMPLES: Rivets, wire, bolts, etc.)

- (e) Firmware and any related unique support tools (such as computers, linkers, editors, test case generators, diagnostic checkers, library of functions and system test diagnostics) specifically designed for equipment or systems covered under any category of the U.S. Munitions List are considered as part of the end-item or component. Firmware includes but is not limited to circuits into which software has been programmed.
- (f) Software includes but is not limited to the system functional design, logic flow, algorithms, application programs, operating systems and support software for design, implementation, test, operation, diagnosis and repair. A person who intends to export software only should, unless it is specifically enumerated in §121.1 (e.g., XIII(b)), apply for a technical data license pursuant to part 125 of this subchapter.
- (g) A system is a combination of enditems, components, parts, accessories, attachments, firmware or software, specifically designed, modified or adapted to operate together to perform a specialized military function.

§121.9 [Reserved]

§ 121.10 Forgings, castings and machined bodies.

Articles on the U.S. Munitions List include articles in a partially completed state (such as forgings, castings, extrusions and machined bodies) which have reached a stage in manufacture where they are clearly identifiable as defense articles. If the end-item is an article on the U.S. Munitions List (including components, accessories, attachments and parts as defined in §121.8), then the particular forging, casting, extrusion, machined body, etc., is considered a defense article subject to the controls of this subchapter, except for such items as are in normal commercial use.

§ 121.11 Military demolition blocks and blasting caps.

Military demolition blocks and blasting caps referred to in Category IV(a) do not include the following articles:

- (a) Electric squibs.
- (b) No. 6 and No. 8 blasting caps, including electric ones.
- (c) Delay electric blasting caps (including No. 6 and No. 8 millisecond ones).
- (d) Seismograph electric blasting caps (including SSS, Static-Master, Vibrocap SR, and SEISMO SR).
 - (e) Oil well perforating devices.

§§ 121.12-121.14 [Reserved]

§ 121.15 Vessels of war and special naval equipment.

Vessels of war means vessels, waterborne or submersible, designed, modified or equipped for military purposes, including vessels described as developmental, "demilitarized" or decommissioned. Vessels of war in Category VI, whether developmental, "demilitarized" and/or decommissioned or not, include, but are not limited to, the following:

- (a) Combatant vessels: (1) Warships (including nuclear-powered versions):
 - (i) Aircraft carriers.
 - (ii) Battleships.
 - (iii) Cruisers.
 - (iv) Destroyers.
- (v) Frigates.
- (vi) Submarines.
- (2) Other Combatants:
- (i) Patrol Combatants (e.g., including but not limited to PHM).
- (ii) Amphibious Aircraft/Landing Craft Carriers.
- (iii) Amphibious Materiel/Landing Craft Carriers.
 - (iv) Amphibious Command Ships.
 - (v) Mine Warfare Ships.
- (vi) Coast Guard Cutters (e.g., including but not limited to: WHEC, WMEC).
- (b) Combatant Craft: (1) Patrol Craft (patrol craft described in §121.1, Category VI, paragraph (b) are considered non-combatant):
- (i) Coastal Patrol Combatants.
- (ii) River, Roadstead Craft (including swimmer delivery craft).
- (iii) Coast Guard Patrol Craft (e.g., including but not limited to WPB).
 - (2) Amphibious Warfare Craft:

§ 121.16

- (i) Landing Craft (e.g., including but not limited to LCAC).
- (ii) Special Warfare Craft (e.g., including but not limited to: LSSC, MSSC, SDV, SWCL, SWCM).
- (3) Mine Warfare Craft and Mine Countermeasures Craft (e.g., including but not limited to: MCT, MSB).
- (c) Non-Combatant Auxiliary Vessels and Support Ships:
 - (1) Combat Logistics Support:
 - (i) Underway Replenishment Ships.
- (ii) Surface Vessel and Submarine Tender/Repair Ships.
 - (2) Support Ships:
 - (i) Submarine Rescue Ships.
- (ii) Other Auxiliaries (e.g., including but not limited to: AGDS, AGF, AGM, AGOR, AGOS, AH, AP, ARL, AVB, AVM, AVT).
- (d) Non-Combatant Support, Service and Miscellaneous Vessels (e.g., including but not limited to: DSRV, DSV, NR, YRR).

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§ 121.16 Missile Technology Control Regime Annex.

Some of the items on the Missile Technology Control Regime Annex are controlled by both the Department of Commerce on the Commodity Control List and by the Department of State on the United States Munitions List. To the extent an article is on the United States Munitions List, a reference appears in parentheses listing the U.S. Munitions List category in which it appears. The following items constitute all items on the Missile Technology Control Regime Annex which are covered by the U.S. Munitions List:

ITEM 1—CATEGORY I

Complete rocket systems (including ballistic missile systems, space launch vehicles, and sounding rockets (see §121.1, Cat. IV(a) and (b))) and unmanned air vehicle systems (including cruise missile systems, see §121.1, Cat. VIII (a), target drones and reconnaissance drones (see §121.1, Cat. VIII (a))) capable of delivering at least a 500 kg payload to a range of at least 300 km.

ITEM 2—CATEGORY I

Complete subsystems usable in the systems in Item 1 as follows:

- (a) Individual rocket stages (see §121.1, Cat. IV(h));
- (b) Reentry vehicles (see §121.1, Cat. IV(g)), and equipment designed or modified there-

for, as follows, except as provided in Note (1) below for those designed for non-weapon payloads:

- (1) Heat shields and components thereof fabricated of ceramic or ablative materials (see \$121.1, Cat. IV(f));
- (2) Heat sinks and components thereof fabricated of light-weight, high heat capacity materials:
- (3) Electronic equipment specially designed for reentry vehicles (see §121.1, Cat. XI(a)(7));
- (c) Solid or liquid propellant rocket engines, having a total impulse capacity of 1.1×10 N-sec (2.5×10 lb-sec) or greater (see §121.1, Cat. IV, (h)).
- (d) "Guidance sets" capable of achieving system accuracy of 3.33 percent or less of the range (e.g., a CEP of 1 j., or less at a range of 300 km), except as provided in Note (1) below for those designed for missiles with a range under 300 km or manned aircraft (see § 121.1, Cat. XII(d));
- (e) Thrust vector control sub-systems, except as provided in Note (1) below for those designed for rocket systems that do not exceed the range/payload capability of Item 1 (see §121.1, Cat. IV);
- (f) Warhead safing, arming, fuzing, and firing mechanisms, except as provided in Note (1) below for those designed for systems other than those in Item 1 (see §121.1, Cat. IV(h)).

Notes to Item 2

- (1) The exceptions in (b), (d), (e), and (f) above may be treated as Category II if the subsystem is exported subject to end use statements and quantity limits appropriate for the excepted end use stated above.
- (2) CEP (circle of equal probability) is a measure of accuracy, and defined as the radius of the circle centered at the target, at a specific range, in which 50 percent of the payloads impact.
- (3) A "guidance set" integrates the process of measuring and computing a vehicle's position and velocity (*i.e.*, navigation) with that of computing and sending commands to the vehicle's flight control systems to correct the trajectory.
- (4) Examples of methods of achieving thrust vector control which are covered by (e) include:
 - (i) Flexible nozzle;
 - (ii) Fluid or secondary gas injection;
- (iii) Movable engine or nozzle; Deflection of exhaust gas stream (jet vanes or probes); or
 - (v) Use of thrust tabs.

ITEM 3—CATEGORY II

Propulsion components and equipment usable in the systems in Item 1, as follows:

(a) Lightweight turbojet and turbofan engines (including) turbocompound engines)